

Chapter 3. Biodiversity and Natural Heritage

Natural heritage refers to the remnant physical and biological systems that preceded and surround human activity. Commonly the biological heritage is further divided into plant and animal communities that make up our natural neighborhood. Attention was focused on the concept of natural heritage when it became increasingly apparent that many elements of that heritage were being degraded or lost (Harris 1984, Little 1995). Since that time, alternative views on the real value of biological resources have emerged (Ashworth 1995, Gallagher 1993, Tilman 1988 and Wilson 1992). Data from a multitude of sources indicates that assigning true value, rather than simply short-term economic value, to natural systems and their components will provide long-term, sustainable benefits to humans (Ashworth 1995, Hawkin 1993). It is essential to plan wisely for development and to conserve an adequate number of significant natural areas in a county or a region will, as development proceeds, result in a less attractive place to live or visit (Thompson and Steiner 1997, Trefil 1994, Wilson 1992). It is increasingly important to balance human developments with the capacity of nature to respond to and sustain these developments.

Natural heritage is closely tied to the concept of biological diversity. It is often commonly known as biodiversity (Wilson 1984). Biodiversity is simply the variety of all living organisms in a given area, and the diversity of life on earth is extremely complex. In an attempt to simplify the complexity, ecologists view biodiversity at different scales. Biodiversity can be studied at genetic, species, population, natural community, ecosystem, and landscape scales (Smith 1974, Weakley et.al. 1979). Much of the information included in this report deals with the species and community levels of biodiversity. A natural community type is "a distinct and reoccurring assemblage of populations of plants, animals, bacteria, and fungi naturally associated with each other and their physical environment" (Schafale and Weakley 1990). Conserving exemplary natural communities is important because it can result in preservation of the community, its component species, and the species interactions and physical conditions that maintain the community, in addition to protecting rare species populations (Boyer 1996, Buchmann and Nabhan 1996, Falk et.al. 1996, Harris 1984, Rohde 1993).

These protected, preserved and restored areas become the local biodiversity bank. These banks will be increasingly important during periods of environmental stress like droughts, storms and disease. These natural areas supply native plant habitat and wildlife refuges, fresh water storage and filtration, ground water recharge, and a host of other necessary environmental functions. Careful land-use planning and conservation of exemplary communities and rare species populations are two important ways that natural heritage can be retained. This Inventory strives to provide an initial basis upon which to begin the work.

Biological Survey and Endangered Species Law

Obtaining landowner permission to survey is an integral part of biological inventory in the 1990's. Occasionally, however, permission to survey on private lands is denied due to a